

Order Channel Management

INSTITUTIONAL INVESTORS, I.E. HEDGE FUNDS OR TRADITIONAL FUNDS, FACE ON THE ONE HAND NEW TECHNOLOGY-ENABLED TRADING CHOICES AND ON THE OTHER HAND INCREASED PERFORMANCE PRESSURE FROM THEIR CUSTOMERS. TO BALANCE THESE OPPORTUNITIES AND CHALLENGES, NEW APPROACHES TO MANAGE THEIR TRADING DESKS AND ORDER DECISIONS ARE REQUIRED.

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New business dynamics

With the evolution of new *execution opportunities*, the securities trading industry has undergone massive changes in recent years. This especially holds for trading processes of Institutional Investors, be it hedge funds or traditional fund management companies (the “buy-side”), where electronic order execution has transformed trading desks. Order Management Systems not only support internal STP by automating the order processing from portfolio management to execution and settlement. Moreover, they enable to connect buy-side trading desks via electronic means (e.g. the FIX protocol) to external brokers and execution venues substituting the traditional order routing via telephone, email or fax.

On the other hand, buy-side firms are under *pressure* by their customers to realize returns that are outperforming or at least matching the communicated benchmarks. Therefore, they have to minimize their trading fees (explicit costs) and the costs that result from the price impact of their own trading

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(implicit costs). As various empirical studies show, these costs reduce returns by up to two fifth if one compares the performance of real portfolios to the returns of “paper portfolios”, i.e. the gross returns without trading costs.

The reduction of explicit costs can be achieved by managing order execution at the buy-side desks instead of outsourcing the full order execution responsibility to sell-side intermediaries, i.e. to brokers. For the reduction of implicit costs, new trading channels like Algorithmic Trading enable for a cautious execution by order splitting and order timing. Already 30% of the overall Xetra trading volume is executed by Algorithmic Trading (Deutsche Börse data), a channel that is successively also offered by brokers to their buy-side customers.

According to the 2005 FIX Protocol Ltd. survey among its members, institutions believe that electronic trading will change the process of trading securities. However, changing standard operating procedures causes costs that

are said to be the biggest obstacles to achieve greater benefits from electronic execution.

The *balancing* of these new technology-enabled but resource-intensive opportunities on the one hand and their cost saving potential on the other hand requires a structured approach to manage the trading decisions of buy-side firms.

Order Channel Management

By identifying and analyzing the key considerations and decision parameters of buy-side trading desks and based on a literature review as well as interviews with industry representatives, we developed Order Channel Management (OCM) as a new concept to deal with these requirements.

In this environment, the setup and operations of the trading-desk are addressed on two levels:

First, on a strategic level, the interaction with the investment strategy of the portfolio management, the selection of execution venues, their connectivity, infrastructure in terms of people and technology, and the necessary policies have to be established. Second, on an operational level, the processes have to be implemented in order to route orders to available venues according to specific order characteristics.

An overview of the (OCM) Framework is depicted in Figure 1. Institutional Investors can utilize the presented structural approach for implementing an individual OCM strategy.

Strategic Order Channel Management

The overall investment strategy and the investment universe of the portfolio management is a key factor influencing the handling of trades and the execution costs and thus

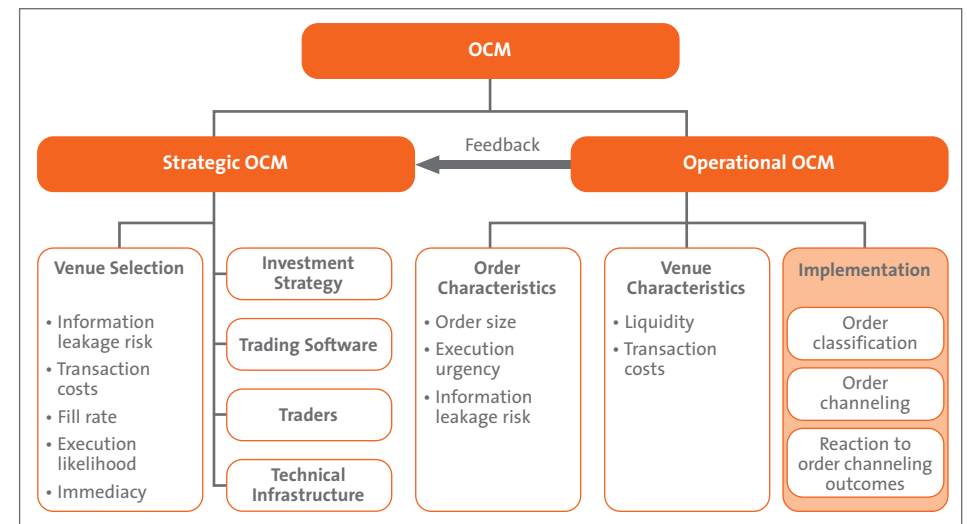


Figure 1: Key Topics in Strategic and Operational Order Channel Management (OCM)

has to be reflected in strategic OCM decisions. The main task of a buy-side trading desk is the prevention of losing excess returns (alpha) that were generated in portfolio management during the strategy implementation and actual order execution.

A tight coordination between fund portfolio management and the trading desk enables an integrated optimization and thus helps to achieve higher trading success. This increases the traders' insight into the motivation of investment decisions.

The key layers of an Order Channeling Framework concerning the trading software of the institutional desk, the connectivity to brokers and execution venues and the technical infrastructure are depicted in Figure 2 and are elaborated briefly in the following:

Institutional Desk

A key strategic issue concerning the setup of the institutional trading desk is the choice of a suitable Order Management System. Both sophisticated standard software suits and internally developed solutions represent an investment with significant total costs of ownership, but support the trading process of securities, e.g. by the integration of analytical tools, and enable for the reduction of inhouse costs through automatization and Straight Through Processing (STP). Additionally, advanced software provides the possibility to aggregate and disaggregate orders internally and to electronically allocate executions to the respective funds and accounts.

Broker Desk

Traditionally, the infrastructure setup of Institutional Investors for the implementation of their investment decisions referred primarily to their business relationships to brokers. The buy-side traders were responsible for order specifications and order releases to brokers, while brokers executed these orders at exchanges or over the counter (OTC).

Broker service portfolios have undergone significant changes and nowadays offer various services beside agency execution (i.e. counterparty search or execution on the market) or principal bids (in a principal bid, a broker takes the execution risk by offering a fixed price for an order). These new services include e.g. Direct Market Access (DMA), Algorithmic Trading (AT) and Smart Order Routing (SOR). DMA means that the broker provides his membership at an execution venue as a portal service and does not touch the order of the buy-side customer for execution. Instead it is directly routed to the respective execution venue. This saves the costs for proprietary connectivity and shields the buy-side firm from technological (new software releases) or regulatory changes at execution venues.

Algorithmic Trading is a trading tool where software algorithms execute orders successively in one market in order to avoid market impact and thus implicit costs by slicing orders into pieces and timing the releases of the partial orders to the venues. Smart Order Routing slices an order based on price and volume information from multiple markets and thus aims at reduction of market impact when liquidity is fragmented over multiple venues.

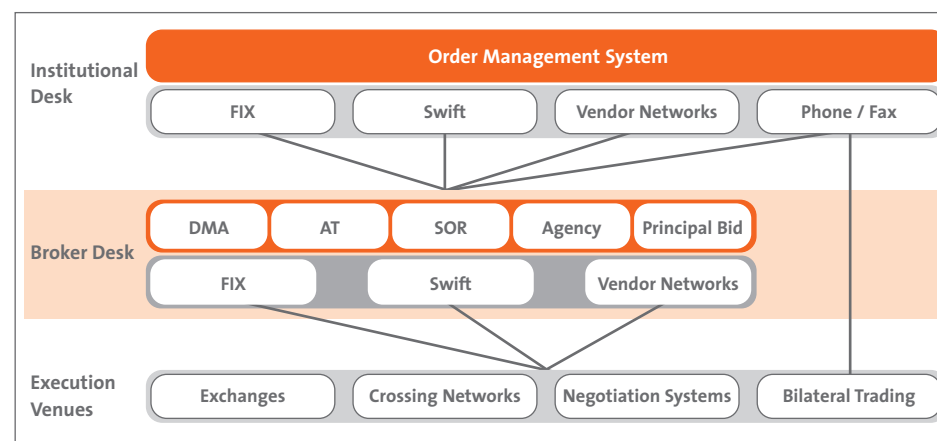


Figure 2: Layers of the Order Channel Management Framework

For the buy-side firms, these new execution services enable commission savings of up to 50% for Algorithmic Trading and even up to two-thirds when utilizing DMA instead of traditional broker execution.

Execution Venues

Beside exchanges, additional venues include crossing networks and block trading facilities – systems that match corresponding orders based on a price imported from a reference market. An extension of the crossing network approach is offered e.g. by Liquidnet following a Peer-to-Peer (P2P) concept, where liquidity is searched within a network of buy-side Order Management Systems. Once the size on the opposite side has been found, both investors are informed and can anonymously negotiate the final execution volume and price.

Access to brokers and the execution venues (if applicable) from the buy-side trading desks

can be realized through proprietary connections or by standardized solutions like the financial exchange protocol (FIX) using vendor networks or via SWIFT.

Operational Order Channel Management

Based on the specified strategic setup, operational OCM (see Figure 1) uses order characteristics and the venue characteristics in order to enable a three step implementation by order classification, order channeling and reaction to order channeling outcomes.

Key Order Characteristics

Order size, the level of execution urgency, and information leakage risk are the relevant order dimensions for operational OCM.

Order size: Transaction costs, defined as the explicit and implicit costs associated with the actual implementation of the investment decision, play a crucial role in execution success. Hidden costs like market impact, timing cost,

and opportunity cost make the lion's share of overall costs, especially when it comes to large orders or block trades.

Execution urgency: One common technique to avoid market impact is to slice large orders and to trade more passively over multiple periods and venues. This slicing solution, however, leads to other problems: The enlarged trading period leads to timing risk as prices can develop in an unfavorable direction. Therefore, execution urgency is a second key order parameter.

Information leakage risk: Especially in less liquid securities, there is a risk that other market participants anticipate the order (based e.g. on ticker or order book information) and perform front-running that counteracts the strategy implementation of buy-side firms.

Order classes

With the three classification parameters at hand, we group orders in a total of six classes (see Figure 3).

In a first step small orders are separated into two subcategories: Passive low touch orders with a low level of execution urgency that can be implemented via liquidity providing means like limit orders and active low touch orders with a higher level of execution urgency implying active trading and therefore risking higher prices. These orders enable for fully electronic execution via Direct Market Access, Algorithmic Trading or Smart Order Routing.

Among large orders with a low level of execution urgency two classes can be specified:

Orders with a low leakage risk belong to the class of orders resulting from strategic trading like those for share buy-back programs. Orders with higher leakage risk constitute the class of high touch orders because they require much attention during their implementation. Finally, large orders with a high level of execution urgency can be subdivided into two additional categories: While the parameter setting of high urgency and low leakage risk is reasonably non-existent (not applicable), orders with a high leakage risk together with large size and high urgency constitute to the class of urgent high touch orders being the toughest type. Here cautious interaction between the buy-side trading desk and multiple brokers is required to avoid the generation of trading patterns that can be detected by other traders.

Illustration of actual order handling

Based on these considerations, day-to-day operational OCM is subdivided into three subsequent phases. First, orders have to be classified according to the three key order characteristics. Second, the actual order channeling decision has to take place. In the final step executions should be controlled enabling reactions to the observed outcomes. Continuous tracking of orders up to their final completion is required. For example, a readjustment of a patient execution strategy becomes necessary when information disseminates or the order cannot be filled. Further exceptional market changes also require strategy reviews. Under such circumstances bro-

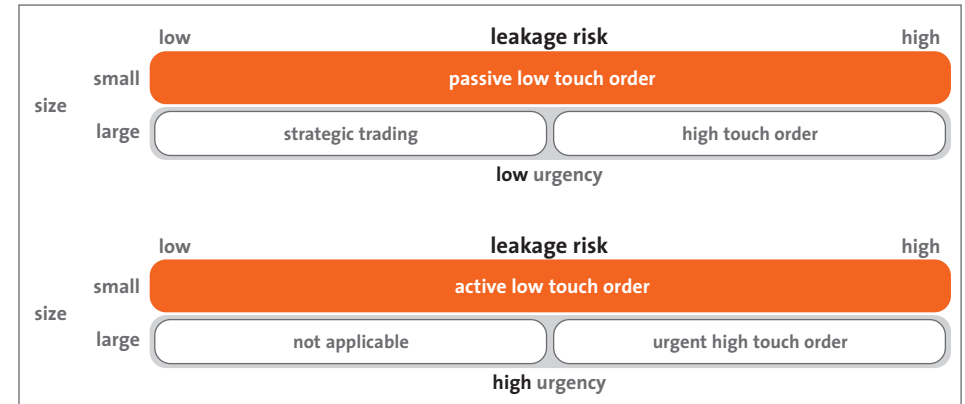


Figure 3: Different order classes

kers typically inform their clients while some automated solutions might fail to achieve this and thus require manual tracking and intervention capabilities. Beside strategy revisions, order channeling outcomes should be incorporated in a comprehensive Post-Trade Analysis that evaluates execution quality relative to the predefined price benchmarks and adjusts the parameters for the actual strategy selection. Simulations based on historical market data allow to evaluate alternative channels.

Conclusions and Future Research

For Institutional Investors, new technology-driven execution opportunities allow for self-directed trading and a greater independence from their brokers, their traditional channels for order execution. In this context, OCM as a structured two level approach was developed to manage the associated new opportunities and challenges.

As future research topics, we will perform an empirical validation of the framework. This will be done by carrying out a survey among Institutional Investors in order to assess their actual implementation of OCM. Thereby, causal relationships between OCM input factors and the value proposition of various trading-desk setup solutions will be investigated empirically.

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